

SPECIFICATION AMENDMENTS:

Amend the second paragraph beginning on page 1 to read as follows:

As a fan-coupling device of this kind, the interior of a sealing housing constructed by a case and a cover is partitioned into an oil reservoir ~~room~~chamber and a torque transmission ~~room~~chamber for internally mounting a drive disk by a partition plate having a supply adjusting hole of oil. A dam is formed in one portion of the inner circumferential wall face of the sealing housing side opposed to the outer circumferential wall portion of the drive disk for collecting and reservoiring the oil at the rotating time. A circulating flow passage is formed between oil reservoir ~~rooms~~chambers by the torque transmission ~~room~~chamber so as to be connected to the dam. The fan-coupling device has a valve member for opening the supply adjusting hole of the above partition plate when the temperature of the external circumference exceeds a set value. When the temperature is equal to or lower than the set value or less, the valve member closes the supply adjusting hole of the above partition plate. In a system for controlling the torque transmission from the drive side to the sealing housing side of the driven side by increasing and decreasing an effective contact area of the oil in a torque transmission clearance portion arranged on an opposite wall face near the exterior of the drive disk and the above sealing housing, a pair of electromagnets are arranged on the front face side or the rear face side of the above sealing housing. A valve member is arranged so as to be opposed to one of the electromagnets and has a magnetic property for opening and closing the supply adjusting hole. Further, a sub-valve member is arranged so as to be opposed to the other electromagnet and has

a magnetic property for opening and closing the above circulating flow passage (see Japanese Patent No.2911623).

Amend the paragraph bridging pages 2 and 3 to read as follows:

However, the above conventional external control type fan-coupling device has a structure in which the electromagnet and an armature for operating the valve member are separated by the case of a non-magnetic material. Therefore, no magnetic force of the electromagnet can be efficiently transmitted to the armature. Further, excessive electromagnetic force is required to attract the armature, and the size and weight of the electromagnet are increased. Accordingly, problems exist in that no fan-coupling device can be made compact and light in weight and a large amount of electric power consumption is required. Further, when the armature is located in the position separated from a rotating shaft within the oil reservoir-~~room~~ chamber, there is a disadvantage in that the operation of the armature, i.e., the operating property of the opening and closing of the valve member becomes worse by receiving the resistance of the oil since the armature always exists within the oil during the rotation of the fan.

Amend the paragraph bridging pages 6 and 7 to read as follows:

The first aspect of the present invention resides in a control method of an external control system fan clutch characterized in that the interior of a sealing housing constructed by a case of a non-magnetic material supported through a bearing on a rotating shaft body fixedly attaching a drive disk to its tip and a cover attached to this case is partitioned into an oil reservoir ~~room~~ chamber and a torque transmission-~~room~~ chamber for internally mounting said drive disk by a partition plate; a dam is arranged in one portion of the inner circumferential wall face of the cover opposed to the outer

circumferential wall portion of the drive disk for collecting and reservoiring oil at the rotating time, and a valve member having a magnetic property and opening and closing an oil circulating flow passage formed between the torque transmission ~~room~~chamber and the oil reservoir ~~room~~chamber is connected to the dam and is arranged within the oil reservoir ~~room~~chamber; an electromagnet is supported by said rotating shaft body through the bearing on the oil reservoir ~~room~~chamber side of said sealing housing, and a mechanism for controlling the opening and closing of the oil circulating flow passage is constructed by operating said valve member by the electromagnet; and the external control type fan clutch is constructed by a system for controlling rotating torque transmission from the drive side to the driven side by increasing and decreasing an effective contact area of the oil in a torque transmission clearance portion formed by the drive side and the driven side; wherein the opening and closing of said valve member are controlled on the basis of at least one signal of the cooling liquid temperature of a radiator, a fan rotating speed, the temperature of transmission oil, a vehicle speed, an engine rotating speed, the pressure of a compressor of an air conditioner, and a turning-on or turning-off signal of the air conditioner.

Amend the third paragraph on page 12 to read as follows:

In the present invention, the external control type fan clutch device shown in Fig. 1, a sealing housing 2 constructed by a case 2-1 and a cover 2-2 is supported by a rotating shaft body (drive shaft) 1 rotated by driving a driving section (engine) through a bearing 13. The interior of this sealing housing 2 is partitioned into an oil reservoir ~~room~~chamber 5 and a torque transmission ~~room~~chamber 6 by a partition plate 4 with an oil supply adjusting hole 8. A drive disk 3 fixedly attached to the tip of the rotating

shaft body 1 is stored into the torque transmission ~~room~~chamber 6 so as to form a torque transmitting clearance between the drive disk 3 and the inner circumferential face of the torque transmission~~room~~ chamber.

Amend the first full paragraph on page 13 to read as follows:

A valve member 9 for oil supply for opening and closing a circulating flow passage 7 for oil collection arranged in the case 2-1 is constructed by a leaf spring 9-1 and an armature 9-2. The base end portion of the leaf spring 9-1 is attached to the case 2-1 so as not to easily receive the resistance of the oil within the oil reservoir~~room~~ chamber 5 at the fan rotating time such that the armature 9-2 of the valve member is located in the vicinity of the rotating shaft body (drive shaft) 1.

Amend paragraphs bridging 13 and 14 to read as follows:

In the fan clutch device of the above construction, when the electromagnet 11 is turned off (non-magnetized), the oil supply adjusting hole 8 is closed by separating the armature 9-2 from the magnetic loop element 10 by the operation of the leaf spring 9-1. Thus, the supply of the oil into the torque transmission ~~room~~chamber 6 is stopped. In contrast to this, when the electromagnet 11 is turned on (magnetized), the armature 9-2 is attracted onto the magnetic loop element 10 side against the leaf spring 9-1. Thus, the leaf spring 9-1 comes in press contact with the case 2-1 side and the oil supply adjusting hole 8 is opened so that the oil is supplied into the torque transmission ~~room~~chamber 6.

Amend the paragraph bridging pages 17 and 18 to read as follows:

Namely, when the clutch is set to the turning-on state, the oil excessively enters the interior of the torque transmission ~~room~~chamber of the clutch and is left.

Therefore, when a signal for reducing the fan rotating speed is outputted in the next timing, a reaction with respect to the signal is delayed by a time required to collect the above oil. Further, the excessive oil within the torque transmission ~~room~~chamber becomes a factor causing the associative rotation when the engine rotating speed is changed in an instant from low speed rotation to high speed rotation as in a case in which the vehicle is started and accelerated from an idling state. Therefore, no excessive oil enters the interior of the torque transmission ~~room~~chamber by setting the upper limit rotating speed of the optimum fan rotating speed (ETFS) in the position of the clutch slightly lower than that in the turning-on rotation, and controlling the fan rotating speed. Therefore, the response delay with respect to the fan rotating speed control signal of the next timing can be shortened as much as possible, and the associative rotation at the engine rotation changing time and the engine starting time can be reduced.

Amend the paragraph bridging pages 19 and 20 to read as follows:

Namely, the fan clutch as an object of the control system of the present invention has a system for collecting the oil into the torque transmission~~room~~chamber by the differential speed between input rotation and a receiving portion (fan). Accordingly, when the above differential speed is reduced, the collecting speed of the oil is reduced, which becomes a cause of the associative rotation at the changing time of the engine rotation (low speed rotation → high speed rotation). Accordingly, it is judged that this differential speed becomes smaller than a certain value, and the fan rotating speed control signal is temporarily stopped (cut). Thus, the excessive supply of the oil is prevented and the associative rotation can be reduced.